Author index for papers in Volume 45

Pages are numbered consecutively through the volume: 1–184, January; 185–360, March; 361–600, May/July; 601–760, September; 761–870, November.

Abali, B., H. Franke, D. E. Poff, R. A. Saccone, Jr., C. O. Schulz, L. M. Herger, and T. B. Smith
287 *Memory Expansion Technology (MXT): Software support and performance*

Abali, B.
303 see Smith, T. B.

Agrafiotis, D. K.
545 *Multiobjective optimization of combinatorial libraries*

Alfonseca, M., and A. Ortega
797 *Determination of fractal dimensions from equivalent L systems*

Alvarado, S. F., L. Rossi, P. Müller, P. F. Seidler, and W. Riess
89 *STM-excited electroluminescence and spectroscopy on organic materials for display applications*

Andreoni, W., A. Curioni, and T. Mordasini
397 *DFT-based molecular dynamics as a new tool for computational biology: First applications and perspective*

Andreoni, W.
101 see Curioni, A.

Angelopoulos, M.
57 *Conducting polymers in microelectronics*

Angelopoulos, M.
639 see Medeiros, D. R.

Aviram, A.
639 see Medeiros, D. R.

Ayton, G. S. D., S. Bardenhagen, P. McMurtry, D. Sulsky, and G. A. Voth
417 *Interfacing molecular dynamics with continuum dynamics in computer simulation: Toward an application to biological membranes*

Baker, N. A., D. Sept, M. J. Holst, and J. A. McCammon
427 *The adaptive multilevel finite element solution of the Poisson–Boltzmann equation on massively parallel computers*

Bardenhagen, S.
417 see Ayton, G. S. D.

Basch, H.
367 see Morokuma, K.

Bates, A. K., M. Rothschild, T. M. Bloomstein, T. H. Fedynyshyn, R. R. Kunz, V. Liberman, and M. Switkes
605 *Review of technology for 157-nm lithography*

Beierlein, T.
77 see Riess, W.

Bernard, A.
697 see Michel, B.

Betley, T. A.
47 see Murray, C. B.

Bietsch, A.
697 see Michel, B.

Birney, E.
449 *Hidden Markov models in biological sequence analysis*

Bland, P. M.
271 see Tremaine, R. B.

Bloomstein, T. M.
605 see Bates, A. K.

Brock, B. C., G. D. Carpenter, E. Chiprout, M. E. Dean, P. L. De Backer, E. N. Elnozahy, H. Franke, M. E. Giampapa, D. Glasco, J. L. Peterson, R. Rajamony, R. Ravindran, F. L. Rawson, R. L. Rockhold, and J. Rubio
207 *Experience with building a commodity Intel-based ccNUMA system*

Brütting, W.
77 see Riess, W.

Burke, J. F.
439 see Davison, D. B.

Carpenter, G. D.
207 see Brock, B. C.

Castelli, V., R. E. Harper, P. Heidelberger, S. W. Hunter, K. S. Trivedi, K. Vaidyanathan, and W. P. Zeggert
311 *Proactive management of software aging*

Chiprout, E.
207 see Brock, B. C.

Chondroudis, K.
29 see Mitzi, D. B.

Corbin, J. S.
771 see Notohardjono, B. D.

Curioni, A., and W. Andreoni
101 *Computer simulations for organic light-emitting diodes*

Curioni, A.
397 see Andreoni, W.

Davison, D. B., and J. F. Burke
439 *Brute force estimation of the number of human genes using EST clustering as a measure*

De Backer, P. L.
207 see Brock, B. C.

Dean, M. E.
207 see Brock, B. C.

Delamarche, E.
697 see Michel, B.

Dhaliwal, R. S., W. A. Enichen, S. D. Golladay, M. S. Gordon, R. A. Kendall, J. E. Lieberman, H. C. Pfeiffer, D. J. Pinckney, C. F. Robinson, J. D. Rockrohr, W. Stickel, and E. V. Tressler
615 *PREVAIL—Electron projection technology approach for next-generation lithography*

Dimitrakopoulos, C. D., and D. J. Mascaro
11 *Organic thin-film transistors: A review of recent advances*

Doyle, H.
47 see Murray, C. B.

Dunham, T. G.
651 see Liebmann, L. W.

Eastwood, M. P., C. Hardin, Z. Luthey-Schulten, and P. G. Wolynes
475 *Evaluating protein structure-prediction schemes using energy landscape theory*

Elnozahy, E. N.
207 see Brock, B. C.

Enichen, W. A.
615 see Dhaliwal, R. S.

Fain, B., Y. Xia, and M. Levitt
525 *Determination of optimal Chebyshev-expanded hydrophobic discrimination function for globular proteins*

Fedynyshyn, T. H.
605 see Bates, A. K.

Floratos, A., I. Rigoutsos, L. Parida, and Y. Gao
455 *DELPHI: A pattern-based method for detecting sequence similarity*

Floratos, A.
533 see Platt, D. E.

Franaszek, P. A., P. Heidelberger, D. E. Poff, and J. T. Robinson
245 *Algorithms and data structures for compressed-memory machines*

Franaszek, P. A., and J. T. Robinson
259 *On internal organization in compressed random-access memories*

Franaszek, P. A.
271 see Tremaine, R. B.

Franke, H.
287 see Abali, B.

Franke, H.
207 see Brock, B. C.

Gao, Y.
455 see Floratos, A.

Gao, Y.
533 see Platt, D. E.

Gaschler, W.
47 see Murray, C. B.

Geissler, M.
697 see Michel, B.

Giampapa, M. E.
207 see Brock, B. C.

Glasco, D.
207 see Brock, B. C.

Golladay, S. D.
615 see Dhaliwal, R. S.

Gordon, M. S.
615 see Dhaliwal, R. S.

Guarnieri, C. R.
639 see Medeiros, D. R.

Hardin, C.
475 see Eastwood, M. P.

Harper, R. E.
311 see Castelli, V.

Heidelberger, P.
311 see Castelli, V.

Heidelberger, P.
245 see Franaszek, P. A.

Heller, T. J.
819 see Matick, R. E.

Herger, L. M.
287 see Abali, B.

Hinsberg, W. D., F. A. Houle, M. I. Sanchez, and G. M. Wallraff
667 *Chemical and physical aspects of the post-exposure baking process used for positive-tone chemically amplified resists*

Holst, M. J.
427 see Baker, N. A.

Houle, F. A.
667 see Hinsberg, W. D.

Howard, W. E., and O. F. Prache
115 *Microdisplays based upon organic light-emitting diodes*

Hu, E. C., P. A. Joubert, R. B. King, J. D. LaVoie, and J. M. Tracey
191 *Adaptive Fast Path Architecture*

Huang, L., L. Massa, and J. Karle
409 *Quantum crystallography, a developing area of computational chemistry extending to macromolecules*

Huang, W.-S.
639 see Medeiros, D. R.

Hunter, S. W.
311 see Castelli, V.

Ignatowski, M.
819 see Matick, R. E.

Irvin, D. R.
789 *Embedding a secondary communication channel transparently within a cyclic redundancy check (CRC)*

Ito, H.
683 *Dissolution behavior of chemically amplified resist polymers for 248-, 193-, and 157-nm lithography*

Joseph, D. J.
229 see Nanda, A. K.

Joubert, P. A.
191 see Hu, E. C.

Juncker, D.
697 see Michel, B.

Kagan, C. R.
29 see Mitzi, D. B.

Kagan, C. R.
47 see Murray, C. B.

Karle, J.
409 see Huang, L.

Kendall, R. A.
615 see Dhaliwal, R. S.

Khoroshun, D. V.
367 see Morokuma, K.

Kind, H.
697 see Michel, B.

King, R. B.
191 see Hu, E. C.

Kuczynski, J., and A. K. Sinha
783 *Strain measurement and numerical analysis of an epoxy adhesive subjected to thermal loads*

Kumar, S., H. J. Wolfson, and R. Nussinov
499 *Protein flexibility and electrostatic interactions*

Kumar, S.
513 see Tsai, C.-J.

Kunz, R. R.
605 see Bates, A. K.

Kwong, R.
639 see Medeiros, D. R.

Lavin, M. A.
651 see Liebmann, L. W.

LaVoie, J. D.
191 see Hu, E. C.

Leipold, W. C.
651 see Liebmann, L. W.

Levitt, M.
525 see Fain, B.

Liberman, V.
605 see Bates, A. K.

Lieberman, J. E.
615 see Dhaliwal, R. S.

Liebmann, L. W., S. M. Mansfield, A. K. Wong, M. A. Lavin, W. C. Leipold, and T. G. Dunham
651 *TCAD development for lithography resolution enhancement*

Luthey-Schulten, Z.
475 see Eastwood, M. P.

Ma, B.
513 see Tsai, C.-J.

Magg, C. K.
639 see Medeiros, D. R.

Mahorowala, A. P.
639 see Medeiros, D. R.

Mansfield, S. M.
651 see Liebmann, L. W.

Mascaro, D. J.
11 see Dimitrakopoulos, C. D.

Massa, L.
409 see Huang, L.

Matick, R. E., T. J. Heller, and M. Ignatowski
819 *Analytical analysis of finite cache penalty and cycles per instruction of a multiprocessor memory hierarchy using miss rates and queuing theory*

Mazzuca, S. J.
771 see Notohardjono, B. D.

McCammon, J. A.
427 see Baker, N. A.

McIntosh, S. C.
771 see Notohardjono, B. D.

McMurtry, P.
417 see Ayton, G. S. D.

Medeiros, D. R., A. Aviram, C. R. Guarnieri, W.-S. Huang, R. Kwong, C. K. Magg, A. P. Mahorowala, W. M. Moreau, K. E. Petrillo, and M. Angelopoulos
639 *Recent progress in electron-beam resists for advanced mask-making*

Michael, M. M.
229 see Nanda, A. K.

Michel, B., A. Bernard, A. Bietsch, E. Delamarche, M. Geissler, D. Juncker, H. Kind, J.-P. Renault, H. Rothuizen, H. Schmid, P. Schmidt-Winkel, R. Stutz, and H. Wolf
697 *Printing meets lithography: Soft approaches to high-resolution printing*

Mitzi, D. B., K. Chondroudis, and C. R. Kagan
29 *Organic–inorganic electronics*

Mordasini, T.
397 see Andreoni, W.

Moreau, W. M.
639 see Medeiros, D. R.

Morokuma, K., D. G. Musaev, T. Vreven, H. Basch, M. Torrent, and D. V. Khoroshun
367 *Model studies of the structures, reactivities, and reaction mechanisms of metalloenzymes*

Müller, P.
89 see Alvarado, S. F.

Müller, P.
77 see Riess, W.

Murray, C. B., Shouheng Sun, W. Gaschler, H. Doyle, T. A. Betley, and C. R. Kagan
47 *Colloidal synthesis of nanocrystals and nanocrystal superlattices*

Musaev, D. G.
367 see Morokuma, K.

Nanda, A. K., A.-T. Nguyen, M. M. Michael, and D. J. Joseph
229 *High-throughput coherence control and hardware messaging in Everest*

Nguyen, A.-T.
229 see Nanda, A. K.

Notohardjono, B. D., J. S. Corbin, S. J. Mazzuca, S. C. McIntosh, and H. Welz
771 *Modular server frame with robust earthquake retention*

Nussinov, R.
499 see Kumar, S.

Nussinov, R.
513 see Tsai, C.-J.

Ortega, A.
797 see Alfonseca, M.

Parida, L.
455 see Floratos, A.

Parida, L.
533 see Platt, D. E.

Peterson, J. L.
207 see Brock, B. C.

Petrillo, K. E.
639 see Medeiros, D. R.

Pfeiffer, H. C.
615 see Dhaliwal, R. S.

Pinckney, D. J.
615 see Dhaliwal, R. S.

Platt, D. E., L. Parida, Y. Gao, A. Floratos, and I. Rigoutsos
533 *QSAR in grossly underdetermined systems: Opportunities and issues*

Poff, D. E.
287 see Abali, B.

Poff, D. E.
245 see Franaszek, P. A.

Poff, D. E.
303 see Smith, T. B.

Prache, O. F.
115 see Howard, W. E.

Rajamony, R.
207 see Brock, B. C.

Ravindran, R.
207 see Brock, B. C.

Rawson, F. L.
207 see Brock, B. C.

Renault, J.-P.
697 see Michel, B.

Riel, H.
77 see Riess, W.

Riess, W., H. Riel, T. Beierlein, W. Brütting, P. Müller, and P. F. Seidler
77 *Influence of trapped and interfacial charges in organic multilayer light-emitting devices*

Riess, W.
89 see Alvarado, S. F.

Rigoutsos, I.
455 see Floratos, A.

Rigoutsos, I.
533 see Platt, D. E.

Robinson, C. F.
615 see Dhaliwal, R. S.

Robinson, J. T.
245 see Franaszek, P. A.

Robinson, J. T.
259 see Franaszek, P. A.

Robinson, J. T.
271 see Tremaine, R. B.

Rockhold, R. L.
207 see Brock, B. C.

Rockrohr, J. D.
615 see Dhaliwal, R. S.

Rossi, L.
89 see Alvarado, S. F.

Rothschild, M.
605 see Bates, A. K.

Rothuizen, H.
697 see Michel, B.

Rubio, J.
207 see Brock, B. C.

Saccone, R. A., Jr.
287 see Abali, B.

Sanchez, M. I.
667 see Hinsberg, W. D.

Schmid, H.
697 see Michel, B.

Schmidt-Winkel, P.
697 see Michel, B.

Schulz, C. O.
287 see Abali, B.

Schulz, C. O.
271 see Tremaine, R. B.

Seidler, P. F.
89 see Alvarado, S. F.

Seidler, P. F.
77 see Riess, W.

Seidler, P. F.
3 see Shaw, J. M.

Sept, D.
427 see Baker, N. A.

Sham, Y. Y.
513 see Tsai, C.-J.

Shaw, J. M., and P. F. Seidler
3 *Organic electronics: Introduction*

Sinha, A. K.
783 see Kuczynski, J.

Smith, T. B., B. Abali, D. E. Poff, and R. B. Tremaine
303 *Memory Expansion Technology (MXT): Competitive impact*

Smith, T. B.
287 see Abali, B.

Smith, T. B.
271 see Tremaine, R. B.

Steele, S. W.
763 *Uninterruptible battery backup for IBM AS/400 systems*

Stickel, W.
615 see Dhaliwal, R. S.

Stutz, R.
697 see Michel, B.

Sulsky, D.
417 see Ayton, G. S. D.

Sun, Shouheng
47 see Murray, C. B.

Switkes, M.
605 see Bates, A. K.

Torrent, M.
367 see Morokuma, K.

Tracey, J. M.
191 see Hu, E. C.

Tremaine, R. B., P. A. Franaszek, J. T. Robinson, C. O. Schulz, T. B. Smith, M. E. Wazlowski, and P. M. Bland
271 *IBM Memory Expansion Technology (MXT)*

Tremaine, R. B.
303 see Smith, T. B.

Tressler, E. V.
615 see Dhaliwal, R. S.

Trivedi, K. S.
311 see Castelli, V.

Tsai, C.-J., B. Ma, Y. Y. Sham, S. Kumar, H. J. Wolfson, and R. Nussinov
513 *A hierarchical, building-block-based computational scheme for protein structure prediction*

Vaidyanathan, K.
311 see Castelli, V.

Voth, G. A.
417 see Ayton, G. S. D.

Vreven, T.
367 see Morokuma, K.

Wallraff, G. M.
667 see Hinsberg, W. D.

Wazlowski, M. E.
271 see Tremaine, R. B.

Welz, H.
771 see Notohardjono, B. D.

Wolf, H.
697 see Michel, B.

Wolfson, H. J.
499 see Kumar, S.

Wolfson, H. J.
513 see Tsai, C.-J.

Wolynes, P. G.
475 see Eastwood M. P.

Wong, A. K.
651 see Liebmann, L. W.

Xia, Y.
525 see Fain, B.

Zeggert, W. P.
311 see Castelli, V.

Zuliani, P.
807 *Logical reversibility*

Subject index for papers in Volume 45

Each index entry below is accompanied by an author's name and a page number; the author index contains the title of the paper and the names of coauthors, if any.

Subject	Author	Page
Algorithms		
Algorithms and data structures for compressed-memory machines	Franaszek	245
Proactive management of software aging	Castelli	311
Biology and biomedical studies		
A hierarchical, building-block-based computational scheme for protein structure prediction	Tsai	513
Brute force estimation of the number of human genes using EST clustering as a measure	Davison	439
DELPHI: A pattern-based method for detecting sequence similarity	Floratos	455
Determination of optimal Chebyshev-expanded hydrophobic discrimination function for globular proteins	Fain	525
DFT-based molecular dynamics as a new tool for computational biology: First applications and perspective	Andreoni	397
Evaluating protein structure-prediction schemes using energy landscape theory	Eastwood	475
Hidden Markov models in biological sequence analysis	Birney	449
Protein flexibility and electrostatic interactions	Kumar	499
Biotechnology		
A hierarchical, building-block-based computational scheme for protein structure prediction	Tsai	513
Brute force estimation of the number of human genes using EST clustering as a measure	Davison	439
DELPHI: A pattern-based method for detecting sequence similarity	Floratos	455
Determination of optimal Chebyshev-expanded hydrophobic discrimination function for globular proteins	Fain	525
DFT-based molecular dynamics as a new tool for computational biology: First applications and perspective	Andreoni	397
Evaluating protein structure-prediction schemes using energy landscape theory	Eastwood	475
Hidden Markov models in biological sequence analysis	Birney	449
Interfacing molecular dynamics with continuum dynamics in computer simulation: Toward an application to biological membranes	Ayton	417
Model studies of the structures, reactivities, and reaction mechanisms of metalloenzymes	Morokuma	367
Multiobjective optimization of combinatorial libraries	Agrafiotis	545
Protein flexibility and electrostatic interactions	Kumar	499
QSAR in grossly underdetermined systems: Opportunities and issues	Platt	533
Quantum crystallography, a developing area of computational chemistry extending to macromolecules	Huang	409
The adaptive multilevel finite element solution of the Poisson–Boltzmann equation on massively parallel computers	Baker	427
Chemical analysis		
Chemical and physical aspects of the post-exposure baking process used for positive-tone chemically amplified resists	Hinsberg	667
Dissolution behavior of chemically amplified resist polymers for 248-, 193-, and 157-nm lithography	Ito	683

Printing meets lithography: Soft approaches to high-resolution printing — Michel — 697
Recent progress in electron-beam resists for advanced mask-making — Medeiros — 639
Review of technology for 157-nm lithography — Bates — 605

Chemical reaction modeling
DFT-based molecular dynamics as a new tool for computational biology: First applications and perspective — Andreoni — 397
Model studies of the structures, reactivities, and reaction mechanisms of metalloenzymes — Morokuma — 367

Chemistry and chemical engineering
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray — 47
Conducting polymers in microelectronics — Angelopoulos — 57
Organic electronics: Introduction — Shaw — 3
Organic–inorganic electronics — Mitzi — 29
Recent progress in electron-beam resists for advanced mask-making — Medeiros — 639

Codes and coding
Embedding a secondary communication channel transparently within a cyclic redundancy check (CRC) — Irvin — 789

Coding theory
Embedding a secondary communication channel transparently within a cyclic redundancy check (CRC) — Irvin — 789

Combinatorial problems
Multiobjective optimization of combinatorial libraries — Agrafiotis — 545

Communication theory
Embedding a secondary communication channel transparently within a cyclic redundancy check (CRC) — Irvin — 789

Communications and communication networks
Embedding a secondary communication channel transparently within a cyclic redundancy check (CRC) — Irvin — 789

Computation
Determination of fractal dimensions from equivalent L systems — Alfonseca — 797

Computational methods
Computer simulations for organic light-emitting diodes — Curioni — 101

Computer architecture
Adaptive Fast Path Architecture — Hu — 191
Experience with building a commodity Intel-based ccNUMA system — Brock — 207
High-throughput coherence control and hardware messaging in Everest — Nanda — 229
IBM Memory Expansion Technology (MXT) — Tremaine — 271
Memory Expansion Technology (MXT): Software support and performance — Abali — 287

Computer organization and design
Adaptive Fast Path Architecture — Hu — 191
Analytical analysis of finite cache penalty and cycles per instruction of a multiprocessor memory hierarchy using miss rates and queuing theory — Matick — 819
Experience with building a commodity Intel-based ccNUMA system — Brock — 207
High-throughput coherence control and hardware messaging in Everest — Nanda — 229
IBM Memory Expansion Technology (MXT) — Tremaine — 271
Memory Expansion Technology (MXT): Software support and performance — Abali — 287
On internal organization in compressed random-access memories — Franaszek — 259

Crystallography
Quantum crystallography, a developing area of computational chemistry extending to macromolecules — Huang — 409

Crystals
Organic–inorganic electronics — Mitzi — 29

Data compression
Algorithms and data structures for compressed-memory machines — Franaszek — 245
IBM Memory Expansion Technology (MXT) — Tremaine — 271
Memory Expansion Technology (MXT): Software support and performance — Abali — 287
On internal organization in compressed random-access memories — Franaszek — 259

Data transmission
Embedding a secondary communication channel transparently within a cyclic redundancy check (CRC) — Irvin — 789

Data, structures and accessing
Adaptive Fast Path Architecture — Hu — 191
Algorithms and data structures for compressed-memory machines — Franaszek — 245
IBM Memory Expansion Technology (MXT) — Tremaine — 271
Memory Expansion Technology (MXT): Software support and performance — Abali — 287
On internal organization in compressed random-access memories — Franaszek — 259

Diodes, light-emitting (LEDs)
Organic–inorganic electronics — Mitzi — 29

Diodes, organic light-emitting (OLEDs)
Computer simulations for organic light-emitting diodes — Curioni — 101
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess — 77

Microdisplays based upon organic light-emitting diodes — Howard 115
Organic electronics: Introduction — Shaw 3
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Display technology
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47
Microdisplays based upon organic light-emitting diodes — Howard 115

Distributed processing
High-throughput coherence control and hardware messaging in Everest — Nanda 229

Drug design
Multiobjective optimization of combinatorial libraries — Agrafiotis 545
QSAR in grossly underdetermined systems: Opportunities and issues — Platt 533

Electrical conduction
Organic thin-film transistors: A review of recent advances — Dimitrakopoulos 11

Electro-optics
PREVAIL—Electron projection technology approach for next-generation lithography — Dhaliwal 615

Electroluminescence
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77
Microdisplays based upon organic light-emitting diodes — Howard 115
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Etching
Recent progress in electron-beam resists for advanced mask-making — Medeiros 639

Field-effect transistors
Organic–inorganic electronics — Mitzi 29

Films, polymer
Conducting polymers in microelectronics — Angelopoulos 57

Finite element analysis
Modular server frame with robust earthquake retention — Notohardjono 771
Strain measurement and numerical analysis of an epoxy adhesive subjected to thermal loads — Kuczynski 783

Fractals
Determination of fractal dimensions from equivalent L systems — Alfonseca 797

Genomic and proteomic analysis
Brute force estimation of the number of human genes using EST clustering as a measure — Davison 439
DELPHI: A pattern-based method for detecting sequence similarity — Floratos 455
Hidden Markov models in biological sequence analysis — Birney 449

Graphics
Determination of fractal dimensions from equivalent L systems — Alfonseca 797

IBM AS/400
Uninterruptible battery backup for IBM AS/400 systems — Steele 763

Interfaces
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77

Lithography
Chemical and physical aspects of the post-exposure baking process used for positive-tone chemically amplified resists — Hinsberg 667
Conducting polymers in microelectronics — Angelopoulos 57
Dissolution behavior of chemically amplified resist polymers for 248-, 193-, and 157-nm lithography — Ito 683
Printing meets lithography: Soft approaches to high-resolution printing — Michel 697
Review of technology for 157-nm lithography — Bates 605
TCAD development for lithography resolution enhancement — Liebmann 651

Lithography, electron-beam
PREVAIL—Electron projection technology approach for next-generation lithography — Dhaliwal 615
Recent progress in electron-beam resists for advanced mask-making — Medeiros 639

Magnetics—studies and structures
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47

Manufacturing
Modular server frame with robust earthquake retention — Notohardjono 771

Masks
Recent progress in electron-beam resists for advanced mask-making — Medeiros 639
Review of technology for 157-nm lithography — Bates 605
TCAD development for lithography resolution enhancement — Liebmann 651

Materials
Strain measurement and numerical analysis of an epoxy adhesive subjected to thermal loads — Kuczynski 783

Mathematics (applied)
Determination of fractal dimensions from equivalent L systems — Alfonseca 797
Determination of optimal Chebyshev-expanded hydrophobic discrimination function for globular proteins — Fain 525
QSAR in grossly underdetermined systems: Opportunities and issues — Platt 533

Measurement
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77
Strain measurement and numerical analysis of an epoxy adhesive subjected to thermal loads — Kuczynski 783

Mechanical analysis
Strain measurement and numerical analysis of an epoxy adhesive subjected to thermal loads — Kuczynski 783

Mechanical design
Modular server frame with robust earthquake retention — Notohardjono 771

Memory (computer) management
Algorithms and data structures for compressed-memory machines — Franaszek 245
Experience with building a commodity Intel-based ccNUMA system — Brock 207
High-throughput coherence control and hardware messaging in Everest — Nanda 229
IBM Memory Expansion Technology (MXT) — Tremaine 271
Memory Expansion Technology (MXT): Competitive impact — Smith 303
Memory Expansion Technology (MXT): Software support and performance — Abali 287
On internal organization in compressed random-access memories — Franaszek 259

Memory, cache
Adaptive Fast Path Architecture — Hu 191
IBM Memory Expansion Technology (MXT) — Tremaine 271

Microelectromechanical systems (MEMS)
Conducting polymers in microelectronics — Angelopoulos 57

Models and modeling
Computer simulations for organic light-emitting diodes — Curioni 101
Proactive management of software aging — Castelli 311

Molecular structure modeling
DFT-based molecular dynamics as a new tool for computational biology: First applications and perspective — Andreoni 397
Interfacing molecular dynamics with continuum dynamics in computer simulation: Toward an application to biological membranes — Ayton 417
Model studies of the structures, reactivities, and reaction mechanisms of metalloenzymes — Morokuma 367
Quantum crystallography, a developing area of computational chemistry extending to macromolecules — Huang 409
The adaptive multilevel finite element solution of the Poisson–Boltzmann equation on massively parallel computers — Baker 427

Multilayers
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77
Organic–inorganic electronics — Mitzi 29

Multiprocessors
Experience with building a commodity Intel-based ccNUMA system — Brock 207

Nanoscale structures and devices
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47

NUMA systems
Experience with building a commodity Intel-based ccNUMA system — Brock 207

Optical science and technology
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Optics
Microdisplays based upon organic light-emitting diodes — Howard 115

Organic electronics
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47
Computer simulations for organic light-emitting diodes — Curioni 101
Conducting polymers in microelectronics — Angelopoulos 57
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77
Microdisplays based upon organic light-emitting diodes — Howard 115
Organic electronics: Introduction — Shaw 3
Organic thin-film transistors: A review of recent advances — Dimitrakopoulos 11
Organic–inorganic electronics — Mitzi 29
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Organic materials
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Organic–inorganic hybrids
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47
Organic electronics: Introduction — Shaw 3
Organic–inorganic electronics — Mitzi 29

Packaging
Strain measurement and numerical analysis of an epoxy adhesive subjected to thermal loads — Kuczynski 783

Parallel processing
The adaptive multilevel finite element solution of the Poisson–Boltzmann equation on massively parallel computers — Baker 427

Performance analysis
Analytical analysis of finite cache penalty and cycles per instruction of a multiprocessor memory heirarchy using miss rates and queuing theory — Matick 819
Experience with building a commodity Intel-based ccNUMA system — Brock 207
High-throughput coherence control and hardware messaging in Everest — Nanda 229

Memory Expansion Technology (MXT): Competitive impact — Smith 303
Memory Expansion Technology (MXT): Software support and performance — Abali 287
On internal organization in compressed random-access memories — Franaszek 259
Proactive management of software aging — Castelli 311

Photoresists
Chemical and physical aspects of the post-exposure baking process used for positive-tone chemically amplified resists — Hinsberg 667
Dissolution behavior of chemically amplified resist polymers for 248-, 193-, and 157-nm lithography — Ito 683
Recent progress in electron-beam resists for advanced mask-making — Medeiros 639
Review of technology for 157-nm lithography — Bates 605

Physical chemistry
Chemical and physical aspects of the post-exposure baking process used for positive-tone chemically amplified resists — Hinsberg 667
Computer simulations for organic light-emitting diodes — Curioni 101
Dissolution behavior of chemically amplified resist polymers for 248-, 193-, and 157-nm lithography — Ito 683
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Physics, solid state
Influence of trapped and interfacial charges in organic multilayer light-emitting devices — Riess 77
Organic thin-film transistors: A review of recent advances — Dimitrakopoulos 11
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Polymers
Organic electronics: Introduction — Shaw 3

Power supplies
Uninterruptible battery backup for IBM AS/400 systems — Steele 763

Printing technology
Printing meets lithography: Soft approaches to high-resolution printing — Michel 697

Programming, programs, and programming languages
Logical reversibility — Zuliani 807

Protein folding
A hierarchical, building-block-based computational scheme for protein structure prediction — Tsai 513
Determination of optimal Chebyshev-expanded hydrophobic discrimination function for globular proteins — Fain 525
Evaluating protein structure-prediction schemes using energy landscape theory — Eastwood 475
Protein flexibility and electrostatic interactions — Kumar 499

Quantum computation
Logical reversibility — Zuliani 807

Reliability
Uninterruptible battery backup for IBM AS/400 systems — Steele 763

Scanning tunneling microscopy
STM-excited electroluminescence and spectroscopy on organic materials for display applications — Alvarado 89

Semiconductors
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47
Organic thin-film transistors: A review of recent advances — Dimitrakopoulos 11

Semiconductors, organic
Organic electronics: Introduction — Shaw 3
Organic thin-film transistors: A review of recent advances — Dimitrakopoulos 11

Servers
Adaptive Fast Path Architecture — Hu 191
Algorithms and data structures for compressed-memory machines — Franaszek 245
Experience with building a commodity Intel-based ccNUMA system — Brock 207
High-throughput coherence control and hardware messaging in Everest — Nanda 229
IBM Memory Expansion Technology (MXT) — Tremaine 271
Memory Expansion Technology (MXT): Competitive impact — Smith 303
Memory Expansion Technology (MXT): Software support and performance — Abali 287
On internal organization in compressed random-access memories — Franaszek 259
Proactive management of software aging — Castelli 311

Simulation
Computer simulations for organic light-emitting diodes — Curioni 101
Interfacing molecular dynamics with continuum dynamics in computer simulation: Toward an application to biological membranes — Ayton 417

Software reliability
Proactive management of software aging — Castelli 311

Superlattices
Colloidal synthesis of nanocrystals and nanocrystal superlattices — Murray 47

Topology
Determination of fractal dimensions from equivalent L systems — Alfonseca 797

Transistors
Organic thin-film transistors: A review of recent advances — Dimitrakopoulos 11
Organic–inorganic electronics — Mitzi 29

Transistors, organic thin film (OTFTs)
Organic thin-film transistors:
A review of recent advances Dimitrakopoulos 11

Vibration
Modular server frame with robust
earthquake retention Notohardjono 771